

## ABSTRACT

The fullerenic structures include fullerenes having molecular weights less than that of C<sub>60</sub> with the exception of C<sub>36</sub> and fullerenes having molecular weights greater than C<sub>60</sub>. Examples include fullerenes C<sub>50</sub>, C<sub>58</sub>, C<sub>130</sub>, and C<sub>176</sub>. Fullerenic structure chemically bonded to a carbon surface is also disclosed along with a method for tethering fullerenes to a carbon material. The method includes adding functionalized fullerene to a liquid suspension containing carbon material, drying the suspension to produce a powder, and heat treating the powder.